![NASPI North American SynchroPhasor Initiative]

NASPI Work Group Virtual Meeting
April 12-14, 2022
Agenda
8:00am PT / 11:00am ET

The North American Synchrophasor Initiative (NASPI) Work Group Meeting will be held April 12-14, 2022, virtually (WebEx). During these three days we will hear from a wide range of speakers on various topics associated with wide-area time-synchronized measurements. Please refer to the draft agenda below for additional details.

Agenda [4/12/22]

Eastern Time	Tuesday, April 12, 2022
11:00 – 11:05 am	Welcome & Introductions: Jeff Dagle (PNNL)
11:05 – 11:20 am	NASPI Update – Jeff Dagle (15 minutes)
	Session # 1 – Big Data Analysis of Synchrophasor Data (FOA 1861) – Final Briefings
11:20 – 12:50 pm	Session/Panel Moderator: Sandra Jenkins (**1 hr 30 mins**) o Discovery of Signatures, Anomalies, and Precursors in Synchrophasor Data with Matrix Profile and Deep Recurrent Neural Networks - Nanpeng Yu (University of California – Riverside) o Robust Learning of Dynamic Interactions for Enhancing Power System Resilience - Yuxuan Yuan and Zhaoyu Wang (Iowa State University of Science and Technology) o Big Data Synchrophasor Monitoring and Analytics for Resiliency Tracking (BDSMART) - Mladen Kezunovic (Texas A&M Engineering Experiment Station)
	Session # 2 – ESAMS Field Demonstration
12:50 – 1:10 pm	Eastern Interconnection Situational Awareness Monitoring System (ESAMS) Demonstration Project - Joe Eto (LBNL)
1:10 – 1:30 pm	**PingThings** Partner presentation from PingThings – Sean Murphy & Kevin Jones
1:30 – 2:10 pm	**Break - long**
	Session # 3 – Use of Real-time Synchrophasor Applications
2:10 – 2:30 pm	AEP's WAMS Experiences with Synchrophasor Applications - Yuan Kong (American Electric Power)
2:30 – 2:50 pm	WAMS Applications for The Control Room of The Future by Using Next Generation Grid Operations Framework - Jan Vit Suntar (DNV Energy Systems)
3:10 – 3:30 pm	WAMS Dynamic Real Time System Simulator - Arthur do Carmo Mouco, Janio Leonardo Los, and Hector Andres Rodriguez Volskis (ONS - Operador nacional do Sistema Elétrico Brasileiro)
3:30 – 3:50 pm	Dominion Energy's Pilot Deployment and Evaluation of Enhanced Linear State Estimator for Grid Resiliency - Backer Abu-Jaradeh (Electric Power Group)
3:50 – 4:10 pm	VR ENERGY o PMU-Based EMS System at SDG&E: Implementation, Framework, and Goals - Robin Manuguid (SDG&E) o Distribution Linear State Estimation to Improve Distribution Network Observability: ComEd Experience - Shikhar Pandey (ComEd) and Marianna Vaiman (V&R Energy)
	Session # 4 Application and utilization of distribution state estimation
4:10 – 4:30 pm	DER Gateway to Support Real-Time Control and Situational Awareness in Distribution Grids - Chad Abbey (Quanta Technology)

Eastern Time	Wednesday, April 13, 2022
11:00 – 11:05 am	Welcome & Agenda Review: Jeff Dagle (PNNL)
	Session # 5 – Extracting actionable information from synchrophasor data
11:05 – 11:25 am	An Integrated Generative Adversarial Network for Identification and Mitigation of Cyber-Attacks in Wide-Area Control - Jishnudeep Kar (North Carolina State University)
11:25 – 11:45 am	Synchronous Phase Angle Measurement Using Smart Meters - David Rieken (Hubbell Inc.)
11:45 – 12:05 pm	Swedish Railway Improves Energy Efficiency with PMU and Time Synchronization - Werner Abt (Meinberg-USA)
12:05 – 12:25 pm	High-speed Data Measurements of The Raw Data for Root-Cause Analysis and Data Management - Manko Ho (IBA America)
12:25 – 12:30 pm	Break
	Session # 6 - Use of real-time synchrophasor applications, continued
12:30 – 12:50 pm	Scientific Tools for Advanced Synchrophasor Data Analytics (SciSync) - Christoph Lackner (Grid Protection Alliance)
12:50 – 1:10 pm	Real-Time System Inertia Monitoring – Michael Cassiadoro (Total Reliability Solutions LLC) and Chris Kimmett (Reactive Technologies)
1:10 – 1:30 pm	Locating Faults in Large Power Grids Using A Few Strategically Placed PMU Measurements - Ali Abur (Northeaster University)
1:30 – 1:50 pm	How to Improve Grid Resiliency by Connecting Analytics & Operations - Hazel Gurule and Gilburt Chiang (Palantir Technologies)
1:50 – 2:10 pm	IEEE SA STANDARDS ASSOCIATION PMU Certification Program - Elizabeth Okutuga (IEEE)
2:10 – 2:45 pm	**Break - long**
	Session # 7 – NASPI Task Team Updates (email naspi@pnnl.gov to get involved)
2:45 – 2:55 pm	CRSTT Update (10 minutes)
2:55 – 3:05 pm	DNMTT Update (10 minutes)
3:05 – 3:15 pm	DisTT Update (10 minutes)
3:15 – 3:25 pm	EATT Update (10 minutes)
3:25 – 3:35 pm	PRSVTT Update (10 minutes)
	Session # 8 - Oscillation mitigation, including specifically inverter-based resources
3:35 – 3:55 pm	Fast Oscillation Detection and Labeling via Coarse-Grained Time Series Data for ML Applications - Xin Xu (Dominion Energy)
3:55 – 4:15 pm	Forced Oscillation Grid Vulnerability Analysis: Texas Grid Case Study - Khaled Alshuaibi (University of Tennessee)
4:15 – 4:35 pm	Stabilizing Transient Disturbances with Utility-Scale Energy Storage Systems - Ryan Elliott (Sandia National Laboratories)
4:35 – 4:55 pm	OSCILLOQUARTZ An ADVA Company Achieving Resilient and Assured PNT in Secure Smart Grids - Nino De Falcis
	NASPI Work Group Reception
4:55 – 5:30 pm	**Please join us for the NASPI Reception in the main meeting room**

Eastern Time	Thursday, April 14, 2022
11:00 – 11:05 am	Welcome & Agenda Review: Jeff Dagle (PNNL)
	Session # 9 – Control Room Application Panel
11:05 – 12:05 pm	CRSTT Panel – Control Room Applications (1 hour) Panel Moderator: James Kleitsch o Synchrophasors in System Operations at Dominion Energy - Lang Chen (Dominion) o SRP Synchrophasors in Operations - Matthew Rhodes (SRP) o Utilization of Synchrophasor Data - Aftab Alam (CAISO) o Synchrophasors in Operations - Murray Mueller (AESO)
	Session # 10 - Experience with synchrophasor data networking, architecture, archiving
12:05 – 12:25 pm	Synchrophasor Data Storage and Compression Experience and Improvements at MISO - Brian Kiefer (MISO Energy)

12:25 – 12:45 pm	Lessons Learned at Scale with the World's Largest STTP Deployment for Synchrophasors – Sean Murphy (PingThings), Kevin Jones (Dominion) and J. Ritchie Carroll (GPA)
12:45 – 1:05 pm	**SEL SCHWEITZER ENGINEERING LABORATORIES** Partner Presentation - Jared Bestebreur
	Session # 11 – Organization Reports from NASPI-Related Activities (10 minutes ea.)
1:05 – 1:15 pm	NERC Synchronized Measurement Working Group (SMWG) update: Tim Fritch (TVA)
1:15 – 1:25 pm	EIDSN update – Kent Simendinger (EIDSN)
1:25 – 1:35 pm	IEEE update: Allen Goldstein (NIST)
1:35 – 2:10 pm	**Break - long**
	Session # 12 – High-Speed Waveform Measurements: Applications and Instrumentation
2:10 – 2:30 pm	A Power Grid Anomaly Detection Algorithm with Point on Wave Data Recording - He Yin (University of Tennessee)
2:30 – 2:50 pm	Performance and Applications of Synchronized Waveform Data Compression - Steven Blair (Synaptec)
2:50 – 3:10 pm	GridSweep: Active Measurements of Electric Distribution Systems – Sascha von Meier (UC Berkeley and Lawrence Berkeley National Laboratory)
	Session #13 - Understanding measurement uncertainty relating to power system oscillation mitigation
3:10 – 3:30 pm	Field Implementation of Wide-area Damping Control System in Large-scale Power Grids - Yi Zhao (University of Tennessee)
	Session # 14 - Extracting actionable information from synchrophasor data to support either real-time or engineering applications
3:30 – 3:50 pm	Analysis of STATCOM Oscillations using Ambient Synchrophasor Data in Dominion Energy - Chetan Mishra (Dominion Energy)
3:50 – 4:10 pm	Analysis of Low Voltage Ride Through Capability of Photovoltaic Solar Generation Using Synchrophasors - Rahul Shukla (Power Systems Operation Corp.)
4:10 – 4:30 pm	Evolving Synchrophasor Data Network Architectures to Support Wide-Area Control – Dexin Wang (Pacific Northwest National Laboratory)
4:30 – 4:50 pm	Detection of Induced and Resonance Voltage Phenomenon Using PMU Data in Real Time System Operation and Mitigation Measures - Minnakuri Venkateswara Rao (Power System Operation Corporation Limited, India)
4:50 – 5:10 pm	Voltage Transformer Failure Prediction With Synchrophasor Data - Md Arif Khan (Schweitzer Engineering Laboratories, Inc.) and Matthew Rhodes (SRP)

NASPI would like to *thank* all of our partners for supporting this meeting!

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